

SWBAT: compare light and sound

Jan 4-7:20 AM

Concept Sheet

~ 7 rows when we're done...

We'll fill in two terms (rows) today.

Concept	Meaning	Sym-bol	Units	Picture
<div>PITCH →</div> FREQUENCY	HOW MANY PER UNIT OF TIME $FREQ = \frac{\#}{TIME}$	f $f = \frac{1}{T}$	hertz $Hz = \frac{1}{sec}$	
PERIOD	HOW MUCH TIME FOR ONE. PERIOD = $\frac{TIME}{\#}$	T $T = \frac{1}{f}$	seconds sec.	
TRANSVERSE	WHEN THE MEDIUM VIBRATES ACROSS THE DIRECTION THE WAVE TRAVELS.			
LONGITUDINAL	WHEN THE MEDIUM VIBRATES ALONG THE DIRECTION THE WAVE TRAVELS.			
<div>INTENSITY →</div> AMPLITUDE	HOW FAR FROM THE MIDDLE.	A	meters m	
WAVELENGTH	HOW FAR FOR ONE "BACK & FORTH"	λ	meters m	
WAVESPEED	DISTANCE OF A WAVE TIME OF A WAVE $V = \frac{\lambda}{T}$	V $V = \lambda \cdot f$	meters second m/s	

Feb 18-6:50 AM

Welcome!!!

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SECA Physics
Monday 19 May 2014

- * Pick up:
 - slip of paper (for later)



Opening Question:

So, light is a wave too? How does it compare to sound?

Centering

Sep 7-7:04 AM

Seeking information

- * Work as a table / group of 2-3
- * Use books, internet, and each others' brains
- * It's okay to guess and/or be wrong as long as you're thinking

	SOUND	LIGHT
TRAVELS THROUGH	ANYTHING w/ MASS - AIR WIRE/METAL WATER NEEDS A MEDIUM	- AIR, LIQUID, GLASS <u>NOTHING</u> DOES <u>NOT</u> NEED A MEDIUM

May 11-7:32 AM

Sound		Light	
NEEDS A MEDIUM		DOESN'T!	
Frequencies	PITCH	COLOR	
Reflected	YES - ECHO	YES - MIRROR	
Speed	$\sim 330 \text{ m/s}$ IN AIR $50 - 5000 \text{ m/s}$	$300,000,000 \text{ m/s}$ IN AIR	
Range	$20 \text{ Hz} \rightarrow 20,000 \text{ Hz}$	VISIBLE LIGHT / RAINBOW $400 \text{ nm} \rightarrow 700 \text{ nm}$	

<http://hypertextbook.com/facts/2003/ChrisDAmbrose.shtml>
<https://www.youtube.com/watch?v=2G9Q-r2leyw>

May 23-8:21 AM

Daily 3 Questions

CP: Light worksheet due Friday 5/23

- * Every day except test/project days
- * 3 Questions on the topics of the day
- * Main source of daily points
- * I am happy to give credit when I have no concerns about someone giving or getting help with the answers.

Your can't get your points if you don't have your **NAME!!!**

Name	Period
1.	
2.	
3.	

Sep 9-7:32 AM

- 1) Which travels faster?
 - a) sound
 - ☒ b) light
 - c) they go the same speed

- 2) Which can travel through nothing-ness?
 - a) sound
 - ☒ b) light
 - c) they both need a medium

- 3) Which can be reflected?
 - a) sound
 - b) light
 - ☒ c) both
 - d) neither

Apr 25-7:25 AM